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# A NEW SPECIES OF *HOMOBEZZIA* (DIPTERA, CERATOPOGONIDAE) FROM EGYPT

By J. W. S. Macfie, M.A., D.Sc., M.B., Ch.B., F.R.E.S.

A collection of biting midges made by Major O. Theodor in the Maadi area, Cairo, between August and November, 1943, and sent to me for examination contained the following species :—*Alluaudomyia melanosticta*, 1 ♀; *Atrichopogon aegyptius*, 9 ♀; *A. homoius* (= *A. alfierii* K.), 1 ♂, 12 ♀; *Culicoides distinctipennis* var. *egypti*, 2 ♂, 1 ♀; *C. kingi*, 5 ♀; *C. puncticollis*, 25 ♀; *C. schultzei*, 7 ♂, 187 ♀; *Dasyhelea* sp. probably *fusca*, 2 ♀; *D. inconspicuosa* var. *egypti*, 3 ♂, 4 ♀; *Forcipomyia ingrami*, 5 ♂, 1246 ♀; and *F. moascari*, 4 ♂, 14 ♀. It contained also four specimens (1 ♂, 3 ♀) of a new species of *Homobezzia* which

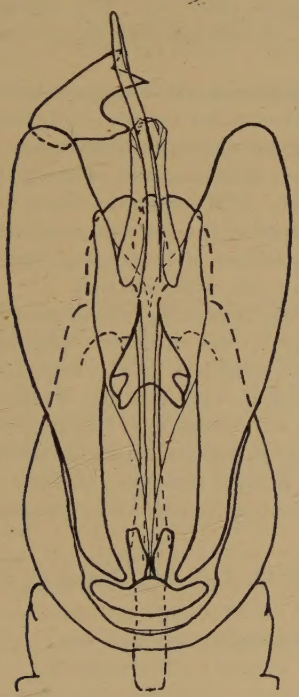

Fig. 1.—*Homobezzia atrata* sp. n., hypopygium of male, ventral view.

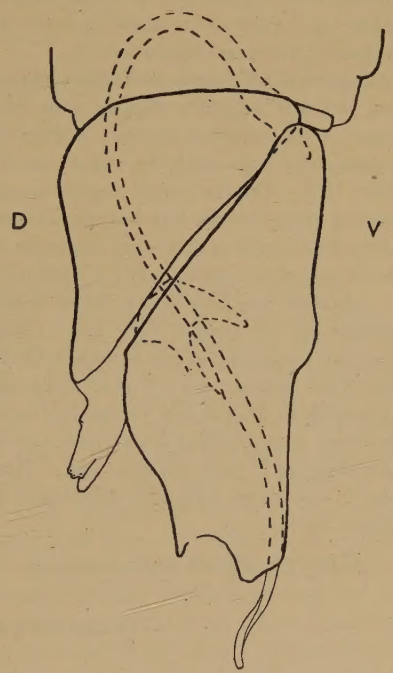


Fig. 2.—*Homobezzia atrata* sp. n., hypopygium of male, lateral view.

although all damaged are described below because their striking characters should make them easy to recognise in future collections. The identification of one of the species of *Atrichopogon* as *A. aegyptius* K. requires confirmation by examination of males, but support is given to it by the fact that the type specimens examined by Kieffer also came from Maadi. When forwarding the collection, in which females of *F. ingrami* preponderate so largely, Major Theodor wrote that the midges " appeared in enormous numbers after the flood, but they did not seem to bite man at all."

**Homobezzia atrata** sp. n.

An almost black species with all the femora and tibiae blackish, the tarsal segments pale brown or nearly colourless, only the fore femora armed, the fourth tarsal segments sub-cylindrical, and the fifth unarmed.

Male and female. Length of wing 1·3 to 1·4 mm., greatest breadth 0·35 to 0·5 mm.

*Head* almost black. Eyes bare, separated above. Palpi pale brown: lengths of last three segments in one female about 11, 9, and 12 units [1] respectively, the third not inflated, without pit. Mandibles of female highly chitinised, armed with a dozen strong teeth. Antennae missing from all the specimens.

*Thorax* almost black, without thoracic tubercle. A group of strong bristles above insertions of wings. Scutellum almost black, bearing about six bristles and numerous small hairs.

*Wings* unadorned, without macrotrichia. Anal lobe well developed. Costa extending in female about three-quarters length of wing and terminating a little beyond level of end of Cu 1; in male shorter, nearly two-thirds length of wing. Single radial cell long, narrow. Fork of M in female slightly proximal to cross-vein, the distance from fork to cross-vein shorter than cross-vein; in male forking practically at cross-vein. M 1 ending a little below tip. Fork of Cu distal to level of cross-vein, its branches forming an acute angle. Halteres with dark brown knobs.

*Legs* with all femora and tibiae blackish; tarsal segments pale brown or almost colourless, but fifth segments slightly more infuscated. Femora not swollen; only fore femora armed, with two short spines. Femora and tibiae well clothed with bristles none of which is especially large with the exception of a few (4) on the hind tibiae of the male. T.R. about 2·3. Fourth tarsal segments sub-cylindrical; fifth unarmed. Claws of female missing from middle legs but the others, namely those of the fore and hind legs, equal, about half length of fifth tarsal segment, each with small barb on inner side. Claws of male small, about one-third length of fifth tarsal segment, equal, with bifid tips.

*Abdomen* blackish above, paler beneath, especially anteriorly. Gland rods in female present on 7th tergite, very long. Spermathecae two, well chitinised, irregularly oval, unequal, measuring in one specimen about 103 μ by 55 μ and 52 μ by 31 μ respectively; the duct very narrow, and not at all chitinised. Hypopygium very dark and of unusual form, appearing in lateral and ventral views as shown in the figures (figs. 1 and 2), which are, however, mere outlines drawn from the specimen after partial maceration in caustic potash and clearing in pure carbolic acid. Homologies of internal structures obscure. Claspers black, very short, ending in three short processes, which are not shown in the sketch of the lateral view.

Egypt: Maadi area, Cairo, 1–7 October 1943, 1 ♂, 3 ♀ (*Major O. Theodor*).

[1] The unit referred to is approximately 3·7 μ.

# ON THE CHINESE AND JAPANESE SPECIES OF *HYPHYDRUS* (COL., DYTISCIDAE)

By J. Balfour-Browne, M.A., F.Z.S., F.R.E.S.

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According to Zimmermann (1930) only five species of *Hyphydrus* are to be found in China and Japan, viz. :—

*excoffieri* Régimbart (1899).
*Exoffieri* Zimmermann (1930) *err. scrips.*
*japonicus* Sharp (1873).
*frontalis* Sharp (1882).
*laeviventris* Sharp (1882).
*lyratus* Swartz (1808).
*orientalis* Clark (1863).
*pulchellus* Clark (1863).
*eximius* Clark (1863).

but to these must be added the following five species described since that date :—

*wui* Gschwendtner (1932).
*detectus* Falkenström (1936).
*pieli* Guignot (1936).
*flavomaculatus* Kamiya (1938).
*falkenströmi* Gschwendtner (1939).

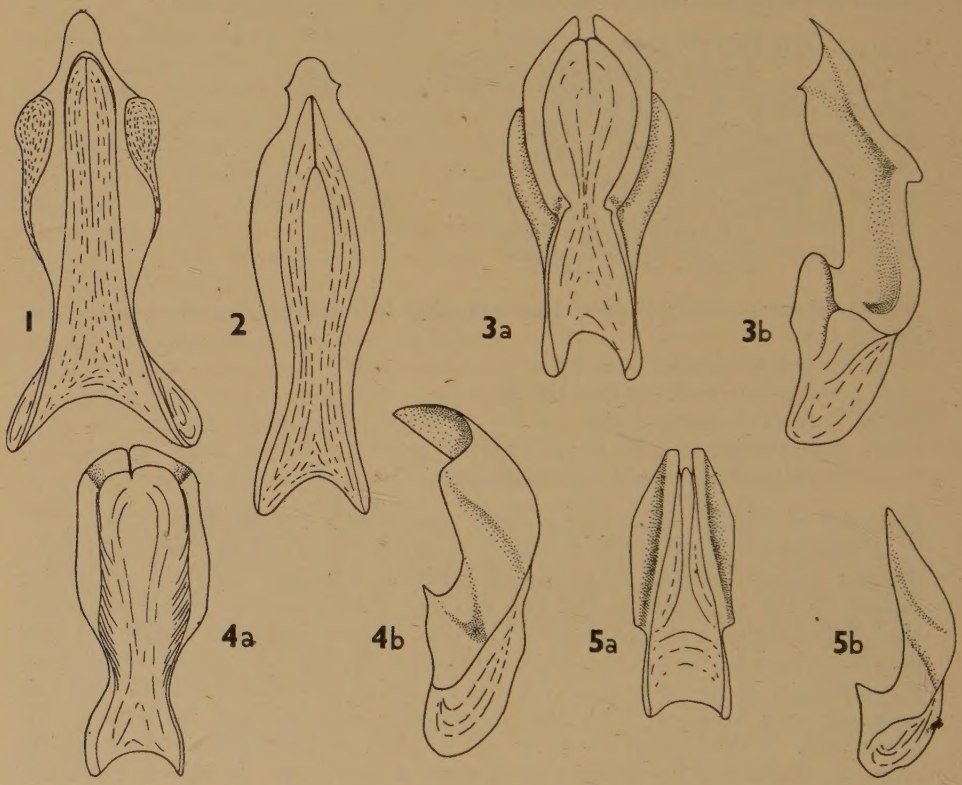
the total of thirteen names supposedly representing ten effective species.

Falkenström (1933, 1935) mentions *orientalis* Clark and in 1936 separated a distinct species, *detectus*, comparing it with his supposed *orientalis* and giving figures of the aedeagus of the two species. Gschwendtner (1939) suggested that Falkenström's supposed *orientalis* was, in fact, *japonicus* Sharp and that *detectus* should be the true *orientalis* of Clark. He had previously (1932) given a description of the aedeagus of a species which he called *orientalis* and this aedeagus was identical with that of *detectus* and this was the basis of his synonymy. Falkenström wrote to me in 1939 requesting the loan of typical *orientalis* Clark, and I sent him a short series in that year. In 1940 he published a clarification of the position of the three species *orientalis* Clark, *japonicus* Sharp and *detectus* Falkenström based on that material, further stating, on my authority, that *japonicus* Sharp was actually a synonym of an older described species. Disorganisation caused by the war prevented an earlier publication of the present paper designed to make a complete clarification of the status of all names published of the Chinese and Japanese species of the genus.

It is possible to exclude *excoffieri* Rég. and *lyratus* Swartz with equal punctuation on the dorsum as being quite distinct species which are unlikely to be confused with any others from the same area. It also seems that *flavomaculatus* Kamiya, known to me only by the five-line " description " in Gschwendtner (1939), can be excluded from the discussion as being quite distinct by its small size. The remaining ten names, however, contain many problems.

The true *orientalis* Clark has been redescribed by Falkenström (1940) and the aedeagus figured. It is clear that his original conception of this species (1933) was erroneous and that the species so named in his papers of 1933, 1935

and 1936 is actually *japonicus* Sharp. The *orientalis* of Gschwendtner, being the same species as *detectus* Falkenström, is therefore not conspecific with *orientalis* Clark and the question therefore arises as to what species, if any, of Gschwendtner (1939) can be the true *orientalis*. There appears to be but a single species, *falkenströmi*, which could represent this and in fact his description, so far as it goes, suits the type series of *orientalis* Clark (three males, two females) from Amoy so closely as to leave no doubt in my mind that the two names are synonymous. The *orientalis* of Zimmermann (1930) is evidently a




Figs. 1–5.—1, *Hyphydrus laeviventris* Sharp. Cotype. Aedeagus, ventral view; 2, *Hyphydrus eximius* Clark. Cotype. Aedeagus, ventral view; 3, *Hyphydrus orientalis* Clark. Cotype. a. Aedeagus, ventral view. b. lateral view; 4, *Hyphydrus detectus* Falkenström. a. Aedeagus, ventral view. b. lateral view; 5, *Hyphydrus pulchellus* Clark. a. Aedeagus, ventral view. b. lateral view. All figures to same scale.

composite species, Gschwendtner stating that a study of Zimmermann's collection had led him to synonymise *detectus* with "*orientalis*," and specimens in the British Museum (N.H.) from Foochow, identified by Zimmermann, are partly true *orientalis* Clark, partly *detectus* Falkenström and partly a third species mentioned below.

*H. detectus* is a species quite distinct from the true *orientalis* Clark, the median lobe of the aedeagus being more transversely rounded at the apex, the sides of the "gutter" in the middle smooth and without a rounded tubercle and the terminal hair tuft of the parameres is very conspicuously shorter. *H. pieli* Guignot (1936) is known to me only by description but the figure of the aedeagus

agrees exactly with that organ of *detectus*; there can be no doubt that the two names are synonymous and that *detectus*, dated 30th January 1936, must take precedence over *pieli*, dated 25th September 1936.

Sharp (1882), without examining the types of Clark's three species *orientalis*, *pulchellus* and *eximius*, states that: "I believe that *pulchellus* Clark and *eximius* Clark will prove to belong to this species (*orientalis*)." This opinion has never been challenged and all subsequent authors have accepted this synonymy. The type series of *eximius*—a male and a female, the latter bearing the British Museum type label—have been examined and the aedeagus extracted. The species was then found to be quite distinct from *orientalis* and, in fact, to be *japonicus* Sharp, described ten years later and it is therefore necessary to replace the name *japonicus* by *eximius* Clark. Sharp (1884) had himself reduced *frontalis* Sharp (1882) to synonymy with *japonicus* and dissection of the male types of each "species" has confirmed this treatment.

*H. pulchellus* Clark is represented in the type series by two females. Examination suggested that this was certainly a species distinct from *orientalis* Clark and a study of the remainder of the *orientalis* series in the British Museum produced four specimens from Foochow, identified by Zimmermann as "*orientalis*," which were clearly conspecific with the *pulchellus* types. One of this Foochow series was a male and extraction of the aedeagus confirmed the opinion, formed on the types of *pulchellus*, that that species was specifically distinct from *orientalis*. *H. wui* Gschwendtner (1932) was described from three females and a comparison of the description with the type of *pulchellus* leaves no possibility of doubt that Gschwendtner, misled by Sharp's erroneous synonymy, was merely re-describing that species under the impression that he was dealing with an undescribed one, an error the more excusable in view of the manifest impossibility an actual study of the specimens demonstrated, that *orientalis* Clark and *pulchellus* Clark could be the same species.

*H. laeviventris* Sharp (1882) has never been in any doubt and a dissection of a male paratype confirms the validity of the species.

The number of species in China and Japan is therefore eight and the synonymy is as follows :—

*excoffieri* Régimbart (1899). CHINA.
*exoffieri* Zimmermann (1930) *err. scrips.*
*lyratus* Swartz (1808). CHINA, E. INDIES.
*bisulcatus* Clark (1863).
*nigronotatus* Clark (1863).
♀*fossulipennis* MacLeay (1871).
*flavomaculatus* Kamiya (1938). JAPAN.
*orientalis* Clark (1863). CHINA.
*orientalis* Zimmermann (1930) *pars.*
*falkenströmi* Gschwendtner (1939).
*orientalis* Falkenström (1940).
*eximius* Clark (1863). CHINA, JAPAN.
*japonicus* Sharp (1873).
*frontalis* Sharp (1882).
*orientalis* Falkenström (1933, 1935, 1936).
*japonicus* Falkenström (1940).
*detectus* Falkenström (1936). CHINA.
*pieli* Guignot (1936).
*orientalis* Zimmermann (1930) *pars*; Gschwendtner (1939).

*pulchellus* Clark (1863). China.
*wui* Gschwendtner (1932).
*orientalis* Zimmermann (1930) *pars.*
*laeviventris* Sharp (1882). Japan.

The following key may serve to distinguish the species, but females of *orientalis* Clark and *eximius* Clark are not separable except by reference to males.

1 (6). Puncturation of dorsum dense and equal.
2 (5). Size over 4·0 mm.
3 (4). Elongate-oval; head red, pronotum mostly red; male with first ventrite produced into a strong, backward-projecting median spine on the hind margin; female with a deep elongate fovea on the elytra near the middle . . . . . *lyratus* Swartz.
4 (3). Broadly oval; head brownish, pronotum black; male without a median spine on the first ventrite; female without an elongate fovea on the elytra . . . . . *excoffieri* Rég.
5 (2). Size under 3·0 mm. . . . . *flavomaculatus* Kamiya.
6 (1). Puncturation of dorsum more or less dense and unequal, of larger and smaller punctures.
7 (8). Puncturation of dorsum very unequal, the larger punctures evidently much larger than the smaller punctures . . . . *laeviventris* Sharp.
8 (7). Puncturation of dorsum not very unequal, the larger punctures not very much larger than the smaller punctures.
9(10). Puncturation less dense on the dorsum, the interstices between the smaller punctures distinctly greater than the diameter of the larger punctures; the surface more shining . . . . . *pulchellus* Clark.
10 (9). Puncturation more dense, the interstices between the smaller punctures not greater than the diameter of the larger punctures; surface less shining or dull (dimorphic females).
11(12). Prosternal process in both sexes with, at most, a very weak longitudinal keel. . . . . *detectus* Falk.
12(11). Prosternal process with a strong or very strong keel.
13(14). Second and third segments of the anterior and middle tarsi of the male less dilated, not much more than in the female; first ventrite of the male with small matt median protuberance . . . *orientalis* Clark.
14(13). Second and third segments of the anterior and middle tarsi of the male more dilated, much more than in the female; first ventrite of the male with small shining median protuberance . . . *eximius* Clark.

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# NOTES ON SIMULIIDAE (DIPTERA). II

By John Smart, B.Sc., Ph.D., F.R.E.S.

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Edwards (1931, 1934 and 1939) considered the family Simuliidae to consist of but two genera: (i) *Parasimulium* Malloch, 1914, with one species *P. furcatum* Malloch, 1914; and (ii) *Simulium* Latreille, 1802, to which he assigned all the other species. Enderlein (1921*a*, 1930, etc.) has proposed to recognise no fewer than 50 genera within the family. A few generic names within the family have been proposed at one time or another by some other workers.

The majority of the students of the family have found the Enderleinian system extremely difficult to work. Edwards (1931) sank all the then extant genera of Enderlein as synonyms of *Simulium* and the genera that Enderlein has erected since then have no greater claim to generic status than those sunk by Edwards. At the same time Edwards (1931) sank such genera as other workers had erected at that time as synonyms. Edwards (1931) divided his genus *Simulium* into seven subgenera, *Prosimulium* Roubaud, *Cnephia* Enderlein, *Gigantodax* Enderlein, *Austrosimulium* Tonnoir, *Eusimulium* Roubaud, *Morops* Enderlein and *Simulium* Latreille (restricted), but later (1934) he combined the last three into one subgenus, *Simulium* Latreille (restricted). Edwards (1939) did not discuss the generic classification of the Simuliidae in detail, but he indicated his adherence to the system proposed in the papers cited above.

It thus comes about that, if the system of classification proposed by Edwards is followed, then, with the exception of *Parasimulium* Malloch which is recognised as distinct by both Edwards and Enderlein, all the genera erected by Enderlein and others in the Simuliidae must be regarded as synonyms of *Simulium* Latreille in the sense in which Edwards used the name.

The elimination of these genera as synonyms results in the appearance of a number of homonyms. Some of these have already been dealt with in published papers (*e.g.* Vargas (1943)); some, however, have not.

The purpose of the present paper is to deal with these homonyms in order that the species may be related to the generic classification of Edwards without confusion. The opportunity is taken of dealing with one or two other points of a similar nature. The fact that Edwards recognised subgenera does not of course affect the issue in respect of the homonyms. It may be noted that Enderlein is the author of many of the names applied to species that now require new names.

### Simulium asakakae *nom. n.*

pro *S. groenlandica* (Enderlein) 1936 : 114 (*Psilozia*).
preoc. *S. groenlandica* Enderlein 1935 : 363 (*Simulium*).

Both species come from Greenland. The first species, for which the new name is proposed, is the genotype of *Psilozia* Enderlein (1936).

### Simulium orsovae *nom. n.*

pro *S. laticalx* (Enderlein) 1936 : 114 (*Cryptectemnia*).
preoc. *S. laticalx* (Enderlein) 1934a : 291 (*Trichodagmia*).

A Rumanian and a Peruvian species respectively. The first species, for which the new name is proposed, is the genotype of *Cryptectemnia* Enderlein (1936).

**Simulium costaricensis** *nom. n.*

pro *S. rufidorsum* (Enderlein) 1936 : 119 (*Acropogon*).
preoc. *S. rufidorsum* (Enderlein) 1934a : 283 (*Psilopelmia*).

A Costa Rican and a Peruvian species respectively.

**Simulium rövdeae** *nom. n.*

pro *S. arctica* (Enderlein) 1936 : 119 (*Schönbaueria*).
preoc. *S. arcticum* Malloch 1914 : 37 (*Simulium*).

Enderlein's species is from Norway while Malloch's is from North America and Greenland.

**Simulium wilhelmlandae** *nom. n.*

pro *S. pygmaea* (Enderlein) 1922 : 70 (*Wilhelmia*).
preoc. *S. pygmaea* Zetterstedt 1838 : 802 (*Simulium*).

Enderlein's species, originally described in *Wilhelmia*, is the genotype of *Morops* Enderlein (1930); it comes from New Guinea. Zetterstedt's species comes from Lappland.

**Simulium bilimekae** *nom. n.*

pro *S. mexicana* (Enderlein) 1934b : 190 (*Hemicnetha*).
preoc. *S. mexicanum* Bellardi 1862 : 6 (*Simulium*).

Both species are Mexican. The first is the genotype of *Hemicnetha* Enderlein (1934b).

**Simulium tangae** *nom. n.*

pro *S. limbatum* Enderlein 1921a : 200 and 1921d : 78 (*Simulium*).
preoc. *S. limbatum* Knab 1915 : 280 (*Simulium*).

Knab's species is from British Guiana; Enderlein's from East Africa.

**Simulium sicuani** *nom. n.*

pro *S. limbata* (Enderlein) 1934a : 282 (*Ectemnaspis*).
preoc. *S. limbatum* Knab 1915 : 280 (*Simulium*).
and *S. limbatum* Enderlein 1921a : 200 and 1921d : 78 (*Simulium*).

*Ectemnaspis limbata* was described from Peru.

**Simulium canbalicum** *nom. n.*

pro *S. balcanicum* (Enderlein) 1929 : 224 (*Prosimulium*).
preoc. *S. balcanica* (Enderlein) 1924 : 285 (*Wilhelmia*).

Both are Bulgarian species.

**Simulium lurybayae** *nom. n.*

pro *S. angustifrons* (Enderlein) 1934a : 292 (*Trichodagmia*).
preoc. *S. angustifrons* (Enderlein) 1921a : 200 and 1921b : 213 (*Nevermannia*).

The first species is from Peru, the second from France. Enderlein (1921b : 213) misspells the specific name as "*augustifrons*."

**Simulium polae** *nom. n.*

pro *S. montanum* Enderlein 1921a : 200 and 1921b : 221 (*Simulium*).
preoc. *S. montanum* Philippi 1865 : 633 (*Simulium*).

Philippi's species comes from Chile, Enderlein's from Germany. Enderlein (1930) transferred his species to *Odagmia*.

**Simulium pseudohirtipes** *nom. n.*

pro *S. nigripes* (Enderlein) 1925 : 30 (*Prosimulium*).
syn. *S. hirtipes* Fries of Edwards (*plur. loc.*).
preoc. *S. nigripes* (Abreu) 1922 : 30 (*Melusina*).
Not *S. hirtipes* Fries of Enderlein (*plur. loc.*) (*Prosimulium*).

Enderlein (*loc. cit.*) maintains that the species which Edwards has in various places identified as *S. hirtipes* Fries is not, in fact, that species but a different one to which he, Enderlein, has applied the name *nigripes*. The new name is required in case Enderlein's contention should, unexpectedly, prove correct. According to Enderlein (1925 and 1922) *S. hirtipes* Fries (of Enderlein) has as a synonym *S. tomosvaryi* Enderlein (1921a : 200 and 1921b : 215). If Enderlein is in error in his identification of *S. hirtipes*, then the name *S. tomosvaryi* Enderlein is available.

**Simulium meunieri** *nom. n.*

pro *S. affinis* Meunier 1907 : 387.
preoc. *S. affinis* Stephens 1829 : 254.

The former is a fossil; the latter was published as a *nomen nudum* but, the material seen by Stephens having been available to him, Edwards (1915) gave the name as a synonym of *S. variegatum* Meigen.

**Simulium baracorne** *nom. n.*

pro *S. ruficorne* (Baranoff) 1926 : 191 (*Odagmia*).
preoc. *S. ruficorne* Macquart 1838a : 88 and 1838b : 84.

Baranov's species comes from Jugoslavia. Macquart's species is an Ethiopian one which does, however, extend to North Africa and Palestine. Synonyms of *S. ruficorne* Macquart are, according to authors, *S. beckeri* Roubaud, *S. divergens* Pomeroy and *S. annulipes* Becker (not *S. annulipes* Shiraki : see immediately below).

**Simulium nacojapi** *nom. n.*

pro *S. japonica* (Shiraki) 1935 : 49 (*Odagmia*).
preoc. *S. japonicum* Matsumura 1931 : 407.

Both are Japanese species. *S. annulipes* Shiraki is, according to Kono and Takahasi (1940), a synonym of *S. japonicum* Matsumura and thus no new name is required for it (not *S. annulipes* Becker : see immediately above).

**Simulium figueroa** *nom. n.*

pro *S. simile* Silva Figueroa 1917 : 33.
preoc. *S. similis* Malloch 1914 : 42c.
Not *S. simile* (Tonnoir) 1925 : 249 (*Austrosimulium*).

Silva Figueroa's species is quoted by authors as " *simile* Silva " and " *simile* Figueroa "; it is Chilean. Malloch's species is from North America and, according to Dyar and Shannon (1927), is a synonym of *S. arcticum* Malloch, 1914.

**Simulium austrosimile** *nom. n.*

pro *S. simile* (Tonnoir) 1925 : 249 (*Austrosimulium*).
preoc. *S. simile* Silva Figueroa 1917 : 33.
and *S. similis* Malloch 1914 : 42c.

Tonnoir's species is described from Tasmania.

**Simulium jerichoensis** *nom. n.*

pro *S. flavipes* Austen 1921 : 116.
preoc. *S. flavipes* Stephens 1829 : 254.

Austen's *flavipes* comes from Palestine. The Stephens species is a *nomen*

*nudum* but, the material seen by Stephens being available to him, Edwards (1915) gave the name as a synonym of *aureum* Fries.

**Simulium irakae** *nom. n.*

pro *S. bipunctatum* Austen 1923 : 275.
preoc. *S. bipunctatum* Malloch 1912 : 650.

Austen's species comes from Mesopotamia; he (*loc. cit.*) also described a variety of it from Palestine, which he named var. *buxtoni*. Knab (1913) sank *bipunctatum* Malloch (December 1912) as a synonym of *dinellii* Joan (April 1912).

*Simulium pertinax* Kollar 1832 : 19.

Syn. *S. venustum* Say of Lutz 1909 : 136.
Syn. *S. distinctum* Lutz 1910 : 341.
Syn. *S. lutziana* (Enderlein) 1934a : 291 (*Trichodagmia*) (preoc. *S. lutzianus* Pinto 1932 : 748).
Not *S. distinctum* Malloch 1913 : 133.

Pinto's *lutzianus* has priority but since the Enderleinian species sinks as a synonym no new name is required. Malloch's *distinctum* is dealt with immediately below. *S. pertinax* is a South American species; material from these regions identified as *venustum* Say is this species. The synonymy given above is after Lane and Porto (1939), who also give *S. inexorabile* Schrottky and *S. flavifemur* (Enderlein) (*Chirostilbia*) as synonyms.

*Simulium trivittatum* Malloch 1914 : 30.

Syn. *S. distinctum* Malloch 1913 : 133.
preoc. *S. distinctum* Lutz 1910 : 341.

Dyar and Shannon (1927) erroneously stated that *distinctum* Malloch was described in Malloch's paper of 1914 and they appear to have made the species an inferior synonym of *trivittatum* Malloch simply because the description of the latter is above notes on the former on the same page. The facts are that, *distinctum* being preoccupied, *trivittatum* is the earliest available synonym by which the species can be called. Lutz's species is a synonym of *pertinax* Kollar (see immediately above).

*Simulium chilianum* Philippi *in* Rondani 1863 : 90 and *S. chilense* Philippi 1865 : 634.

In a footnote in his catalogue Kertesz (1902 : 286) hinted that these two species might be synonymous; he also erroneously gave the date of the paper in which *S. chilianum* was published as 1865 and attributed the species to Rondani.

Pinto (1932 : 728) gave the two species as distinct but, like Kertesz (*loc. cit.*), he erroneously gave the date of publication as 1865 and attributed the species to Rondani. The context in Pinto's paper indicates that he must have had his particulars of *S. chilense* from Philippi's original paper but his information about *S. chilianum* from Kertesz's catalogue.

Reed (1888 : 8) lists *S. chilense* in his catalogue of Chilean Diptera but omits *S. chilianum*. The introduction to his catalogue and the contents indicate that he was not aware of Rondani's paper (*loc. cit.*), in which some three dozen Chilean species of Diptera are dealt with, and many of those described as new are attributed by Rondani to Philippi.

Edwards (1931 : 139) treats *S. chilense*, but omits any mention of *S. chilianum* either as a valid species or as a synonym.

*S. chilianum* is the only species of *Simulium* noted in Rondani's paper; *S. chilense* is one of seven species noted in Philippi's paper.

Rondani's paper is not readily accessible and his brief diagnosis or description is quoted in full herewith :

" Gen. SIMULIUM Mgn.
" Sp. n. CHILIANUM Phil.—Long. Mill. 3.
" Ater opacum, leviter grisei adspersum; pedibus, praesertim posticis,
" paulo lutei sericeis—Alae limpidae.
" Chiliae—Philippi."

Philippi's paper is more accessible and in addition Edwards (*loc. cit.*) has identified *S. chilense* and given notes on the species which he assigned to the subgenus *Gigantodax* Enderlein as defined by Edwards (*loc. cit.*). The original diagnosis may, however, be quoted with advantage since it immediately shows that *S. chilense* cannot be the same species as *S. chilianum*.

" 6. *S. chilense* Ph. S. oculis antennisque fuscis; thorace laete rufo; abdomine nigro pedibus pallide testaceis. Long. corp. 1½ lin., extens. alar. 4½ lin.
" Marem e prov. Valdivia attuli."

This is followed by some notes on the species in the German language.

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# *LEPTOCERA DOWNESI* SP. N. (DIPTERA, SPHAEROCERIDAE) BREEDING IN SPROUTING WHEAT

By O. W. Richards, M.A., D.Sc., F.R.E.S.

**Leptocera downesi** sp. n.

♂♀. Somewhat bronzy black, thorax moderately shining; head, pleura and legs greyish dusted; buccae, centre of pleura, coxae and trochanters somewhat yellowish tinged; halteres pale yellow with a dark stalk. Wings slightly infuscated. Length (body) about 2·0 mm.; wings ♀ 2·15 mm., ♂ 1·89 mm.

Head on each side with one vibrissa and one almost equally long, upturned jowlar bristle. Vertex produced into a considerable rounded knob between the well-separated antennae, in profile genae distinctly visible in front of eyes. Arista two and a half times as long as antenna (or a little longer) with short, not very dense pubescence. Four interfrontal bristles of about same size. One strong and two weak humeral bristles; five pairs of weak

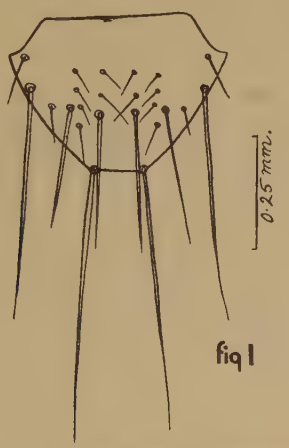



Fig. 1.—Dorsal view of scutellum.

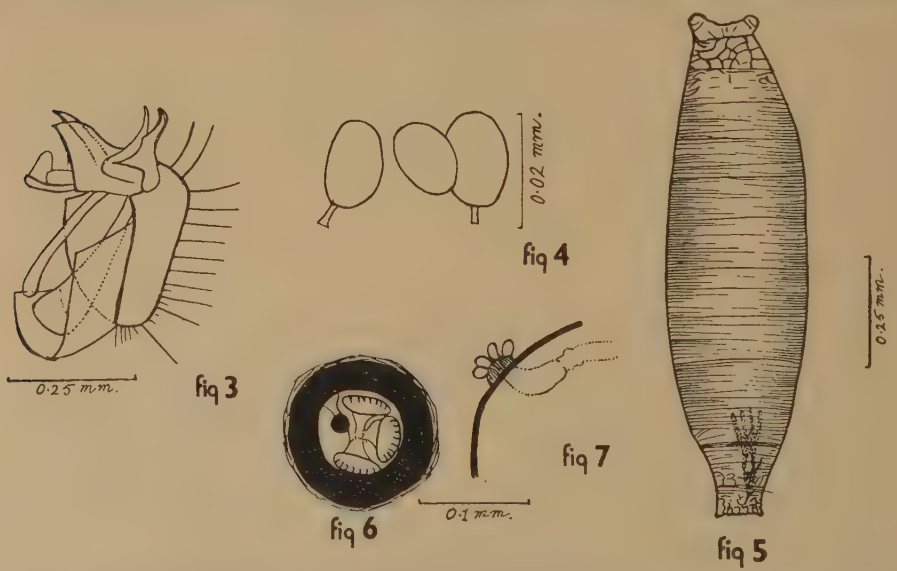
dorso-centrals; acrostichals weak, only just distinguishable from the microchaetes, three pairs in front of thorax separated by one row of microchaetes and a scarcely longer prescutellar pair behind. Sternopleuron with one strong and one weaker anterior bristle. Scutellum (fig. 1) with two pairs of strong bristles, a rather weak bristle between them, set in a little from the margin, and a very weak anterior bristle, one moderately strong pair on the posterior part of the disk and a number of minute bristles in front of this pair and between it and the sides. Wings (fig. 2) with first sector of costa bristly, 3–5 of the bristles directed upwards and posteriorly, the two proximal ones of these bristles large, costa not overpassing $R_{4+5}$, second sector of costa about twice as long as third, $R_{2+3}$ regularly but not very strongly sinuate, $R_{4+5}$ slightly curved towards costa (distinctly more than *L. fuscipennis* (Hal.); less than in such species as *L. ensenada* Rich.), $M_{1+2}$ produced to costa as a fold which is nearly parallel to $R_{4+5}$, $M_{3+4}$ very shortly produced beyond the cell, allula narrow. Fore legs simple; mid trochanter with strong curved bristle; mid femur in ♂ at base ventrally with a short stout bristle with end a little curved; mid tibia at $\frac{1}{5}$ with two pairs of bristles (lower pair the stronger) surmounted by a single bristle, at

$\frac{3}{4}$ with a pair of strong bristles and a weaker one (surmounted by a very small bristle) in front and a little before them, ventrally with a small central and a preapical bristle; basi-

Fig. 2.—Right wing.

The photograph of the wing was kindly taken for me by Dr. R. Dennell.

tarsus with a strong ventral bristle; hind femur with some antero-ventral bristles near tip; tibia with scattered bristles nearly as long as diameter of tibia, second tarsal segment




Figs. 3–7.—3, Male genitalia from right side; 4, female spermathecae; 5, dorsal view of puparium; 6, end view of one posterior spiracular process; 7, one anterior spiracular process.

nearly twice as long as first. Male genitalia (fig. 3) small and inconspicuous, with short pubescence, forceps usually invisible, small and hook-like; last visible dorsal segment of female, dull, unsculptured, cerci very small, without bristles, three unsculptured spermathecae (fig. 4).

Type ♂, allotype ♀, 23 ♂, 34 ♀ paratypes, bred from damp sprouting Plate wheat in a ship's hold, Glasgow, v.1944 (*J. A. Downes*); 4 ♂, 3 ♀ paratypes, in Plate flour infested by various beetles and by *Ephestia cautella* (Walk.), in a ship's hold, Glasgow, viii.1944 (*J. A. Downes*). Type, allotype and some paratypes will be deposited in the British Museum (Natural History).

This species belongs to the group of *L. fuscipennis* Hal. and is almost certainly a native of Argentina. In Duda's key (1925, *Arch. Naturg.* **90A**, Heft 11 (1924) : 15), it runs down to couplet 28. $R_{4+5}$ is less strongly bent than in *L. divergens* Duda and *L. pluriseta* Duda but more strongly so than in *L. fuscipennis* (Hal.). The pair of strong discal scutellar bristles is not found in any of these species, nor in *L. decimsetosa* Richards, 1931.

The puparium (figs. 5–7) is a little different from any of those figured by myself (*Proc. zool. Soc. Lond.* **1930** : pl. 1) or Goddard (1938, *Trans. Soc. Brit. Ent.* **5** : 235–58, 13 figs.).

## STUDIES ON SOME INDIAN THYSANOPTERA

By Shumsher Singh, B.Sc., Assoc. I.A.R.I.

Since the publication of my "Contribution to the Knowledge of Indian Thysanoptera" [1] I have collected a further mass of data, which is presented below. I am greatly indebted to Dr. Hem Singh Pruthi, the Imperial Entomologist, and to Mr. M. C. Cherian, the Entomologist, Madras, for the facilities they kindly provided during my work in their laboratories. To Rao Sahib Dr. T. V. Ramakrishna Ayyar I express my gratitude for advice and encouragement.

The paper deals with the following :—*Neolimothrips* Shumsher; *Limothrips* (*Neolimothrips*) *brachycephalus* (Shumsher); *Limothrips* (*Neolimothrips*) *saccharivora* sp. n.; *Hydatothrips solanifolii* sp. n.; *Scirtothrips* Shull; *Anaphothrips* (*Scirtothrips*) *dorsalis* (Hood).

### *Neolimothrips* Shumsher.

1942, *Neolimothrips* Shumsher, *Indian J. Ent.* **4** (2) : 118.

From the fact that this genus differs from *Limothrips* Haliday as restricted by Shumsher (*op. cit.* : 117–8) significantly only in having two postangular prothoracic setae instead of one, in the same way as *Dichaetella* Pr. differs from *Monochaetella* Pr., it is better to regard *Neolimothrips* as a subgenus of *Limothrips*.

### *Limothrips* (*Neolimothrips*) *brachycephalus* (Shumsher).

1942, *Neolimothrips brachycephalus* Shumsher, *Indian J. Ent.* **4** (2) : 118.

This species was described from one female and two males collected in October 1940 on *Pennisetum typhoideum* in Ambala Cantonment by me. I have collected a female within a tender rolled-up leaf of *Bambusa arundinacea* at Coimbatore in July 1944.

[1] 1942, *Indian J. Ent.* **4** (2) : 111–35.

**Limothrips (Neolimothrips) saccharivora** sp. n.

*Female.*—Length about 1·35–1·5 mm. General colour almost chestnut-brown, the thorax a little yellowish, segment 10 of abdomen black-brown. Legs brown; fore tibiae light yellow, shaded with brown basally; tips of intermediate and hind tibiae yellowish; all tarsi light yellow. Antennal segments 1, 2 (except at tip), 6, 7 and 8 concolorous with head; segment 2 near tip and segments 3–5 yellow. Wings yellowish.

*Head* very little longer than wide at base, where it is widest; produced between the eyes into an anteocular antenniferous process which is about $\frac{1}{6}$ as long as head. Interocellar bristles conspicuously long (30 microns), anteocular series of four setae about 13 microns long, postocular series short. Eyes not protruding (about 42 microns long), less than half the length of the head and a little shorter than the cheeks. The ocelli about as large as the largest facets of the eyes; the front ocellus about a third of the length of eye behind the front margin of the eyes. Antennae about 1·5 as long as head, 8-segmented; 1st segment short, broad, cylindrical; 2nd barrel-shaped; 3rd stalked, elongate-cup-shaped; 4th and 5th oval with constricted bases; 6th elongate-oval, tapering distally; stylar segments thin, tapering to tip. Sense-cones thin, long, simple and inconspicuous. Mouth-cone sharply pointed, very long, surpassing base of prosternum, constricted at middle from where the two-segmented maxillary palpi arise; the basal palpal segment short, cylindrical; the apical much longer, tapering distad in the same way as in *brachycephalus* Sh.

*Prothorax* about 1·2 as broad as long, bristles at hind angles slender, the inner one slightly longer than the outer and about 0·35 as long as the pronotum. Mesothorax broader than pro- or metathorax; metathorax about as long as broad. Legs normal.

*Wings* well developed. Fore-wing: costa with 24–26 setae, upper vein with 6–8 basal (in two groups of 3 or 4) and two apical setae; lower vein with 9 or 10 setae; scale with 4 setae on anterior margin, one surfacial seta and two "sense-cones." All setae pale, slender and rather long.

*Abdomen* long and slender, apex acutely conical; segment 10 with a dorsal suture; 9th segment 1·25 as long as 10th. Bristles on 9th and 10th long, strong and conspicuous.

*Measurements:*

| | Length | Breadth |
|---|---|---|
| Head | 0·19 mm. | 0·18 mm. |
| Pronotum | 0·18 mm. | 0·21 mm. |
| Pterothorax | | 0·24 mm. |
| Wing | 0·90 mm. | |
| Antenna | 0·28 mm. | |

| Antennal segments | I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| Length in microns | 25 | 39 | 48 | 38 | 38 | 56 | 15 | 18 |
| Breadth in microns | 30 | 30 | 20 | 21 | 19 | 20 | 8 | 6 |

*Male.*—Body length 1·4 mm. Much resembling the female. Apex of abdomen rounded; hind margin of the 9th tergite produced into a pair of spine-set tubercles, one on each side of but some distance from the middle line. Penis pyriform, curved dorsally near tip.

*Measurements:*

| | Length | Breadth |
|---|---|---|
| Head | 0·15 mm. | 0·132 mm. |
| Pronotum | 0·15 mm. | 0·154 mm. |
| Pterothorax | | 0·186 mm. |
| Wing | 0·67 mm. | |
| Antenna | 0·24 mm. | |

| Antennal segments | I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| Length in microns | 25 | 35 | 41 | 36 | 30 | 45 | 14 | 16 |
| Width in microns | 28 | 27 | 18 | 19 | 19 | 18 | 8 | 5 |

Described from three females and one male collected by me on sugarcane leaves (within rolled tips) in Coimbatore on 15th July 1944.

This insect agrees in all details with *Bregmatothrips ramakrishnae* Bagnall, but has 2-segmented maxillary palpi. The description of *B. ramakrishnae* does not mention anything about the mouth-cone and the maxillary palpi. If *B. ramakrishnae* Bagnall is synonymous with *B. binervis* (Kobus) as has been suggested by Karny [2] and if as a *Bregmatothrips* Hood it has 3-segmented maxillary palpi, the very close resemblance between it and *L.* (*N.*) *saccharivora* with 2-segmented maxillary palpi is amazing and likely to shed valuable light on the value of certain characters (like processes of 9th abdominal segment of male) used in classification.

Key to the species of *Limothrips* (*Neolimothrips*).

Upper vein of fore-wing with 4 basal setae; pronotum more than 1·3 times as broad as long . . . . . *brachycephalus* Shumsher.

Upper vein of fore-wing with 6 or 7 basal setae; pronotum only about 1·2 as broad as long . . . . . *saccharivora* sp. n.

**Hydatothrips solanifolii** sp. n.

*Female.*—Length about 0·81 mm. General colour pale yellow. Antennal segment 4 near the tip, 5 (except near the base) and 6–8 entirely grey-infumate. Eyes black. Ocelli orange-yellow with red cups. Body setae yellow, inconspicuous. Apex of ovipositor amber-yellow.

*Head* about as long as broad across cheeks, broader across eyes; slightly projecting in front of eyes which are large and laterally protruding. The head is usually retracted into the prothorax up to the base of the eyes. The front margin of the vertex arched, surface in front of the ocelli depressed; occiput also slightly depressed in relation to the interocular ocelliferous " bridge." Surface faintly cross-striate. Cheeks slightly but broadly constricted in the middle. Interocular space about as wide as an eye which is 15 microns wide and 24 microns long from front margin to junction with cheek. Front ocellus small, directed forwards, and so to speak " pushed " in between the hind ocelli which are directed sideways and are contiguous with the inner hind angle of the eyes. The entire head, including the antennae, is devoid of conspicuous hairs. Mouth-cone heavy, rounded, reaching middle of prosternum, but appears to reach hind margin when the head is normally retracted. Maxillary palpi 3-segmented, the distal segment about as long as the basal two together and a little thicker than the labial palp. Antennae more than twice as long as the head; 8-segmented. Segments 3 and 4 with curved, forked, transparent sense-cones reaching to about the middle of the succeeding segment; segments 5 and 6 with a short external sense-cone. Segment 1 transverse, with straight sides; segment 2 barrel-shaped, outer side slightly more arched than inner; segment 3 pyriform, gradually narrowed to the basal stalk; segments 4 and 5 cup-shaped, emarginate distally, the 4th slightly bulging in the middle, the 5th has a ring-like basal constriction; 6th elongate-ovate, tapering towards apex; segments 7 and 8 short, tapering apically and forming a smooth cone with the apical half of 6th segment.

*Prothorax* longer than wide at the front margin and shorter than wide near hind margin. Front angles rectangular, hind angles rounded, the hind margin arched, sides and front margin straight. Surface faintly cross-striated with raised anastomosing transverse lines. A few very minute and inconspicuous hairs strewn over the shield.

*Mesothorax* much wider than long, with sides strongly arched.

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[2] 1926, *Mem. Dept. Agr. India*, Ent. **9** (6) : 205.

*Metathorax* shorter than mesothorax, cylindrical, slightly widening posteriorly. Legs normal; fore and mid legs about equal, hind pair about a quarter longer; all tibiae with a pair of relatively stout setae near tip within.

Wings long and narrow. Fore-wings with a prominently yellow ambient vein and one longitudinal vein which in the distal $\frac{3}{4}$ of the wing length runs almost fused with the front marginal sector. Fringe sparse, on front margin starting beyond the basal third, and on hind margin beyond the basal quarter. Six or seven weak setae are borne by the lower edge of the longitudinal vein, and about 16 by the costa; these setae are extremely difficult to distinguish from the fringe.

*Abdomen* slender, elongate, almost uniformly wide from base to about the 7th segment, thenceforth acutely pointed to apex. Hind margin of tergites 2–6 with a very fine fringe, wanting in the middle; tergites 7 and 8 with a similar but complete fringe.

*Measurements:*

| | Length | Breadth |
|---|---|---|
| Head | 0·084 mm. | 0·084 mm. across cheeks. |
| | | 0·093 mm. across eyes. |
| Pronotum | 0·108 mm. | 0·078 mm. front margin. |
| | | 0·120 mm. greatest. |
| Mesothorax | 0·093 mm. | 0·145 mm. |
| Metathorax | 0·075 mm. | 0·112 mm. |
| Abdomen | | 0·132 mm. |
| Wing (without fringes) | 0·450 mm. | |
| Antenna | 0·183 mm. | |

| Antennal segments | I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| Length in microns | 15 | 26 | 33 | 28 | 30 | 35 | 6 | 9 |
| Width in microns | 21 | 22 | 18 | 18 | 15 | 15 | 6 | 5 |

*Male.*—About 0·6 mm. long. Apterous and without ocelli; otherwise much resembling the female. Abdomen without sternal depressions. Penis concolorous with body, curved upwards.

*Measurements:* Head 0·084 mm. long; prothorax 0·108 mm. long. Antenna 0·168 mm. long.

| Antennal segments | I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| Length in microns | 16 | 24 | 27 | 23 | 27 | 34 | 6 | 12 |
| Width in microns | 15 | 18 | 17 | 16 | 15 | 15 | 6 | 5 |

Described from two females and two males from among hundreds that were found breeding on the under-surface of the leaves of *Solanum melongena*, especially the thorny variety. The thrips moved about on the hairy surface sluggishly and would not skip even on being disturbed. This species differs from *Hydatothrips ramaswamiahi* Karny in being uniformly yellow and in having very few setae on veins of the fore-wings, etc.

## *Scirtothrips* Shull.

1909, *Scirtothrips* Shull, *Entom. News* **20** (5) : 222.
1912, *Scirtothrips* Jones, *U.S.D.A., Bur. Ent. Tech. ser.* 23, pt. 1 : 15.
1914, *Scirtothrips* Hood, *Proc. ent. Soc. Washington* **16** : 240.
1921, *Scirtothrips* Karny, *Treubia* **1** (4) : 237 and 240.
1928, *Scirtothrips* Priesner, *Die Thysanopteren Europas* : 169.

This genus has the following characters as italicised by Shull himself: "Head is shorter than broad and shorter than prothorax. . . . One spine of moderate length is borne by each posterior angle of prothorax. . . . Species of this genus have the power of springing."

While distinguishing his *Scirtothrips* from *Anaphothrips* Uzel Shull further states that *Anaphothrips* Uzel does not allow inclusion of species with transverse heads. This, however, is questionable : Jones (1912) has pointed out that *A. tricolor, A. longipennis* and *A. albus* have heads noticeably wider than long; and *A. ramakrishnae* Karny, *A. transvaalensis* Faure and many others also have distinctly transverse heads; but all these are true *Anaphothrips* Uzel. The power of springing which is deemed important by Shull for distinguishing his *Scirtothrips* from *Anaphothrips* Uzel, in the absence of any significant structural character correlated with it, makes it impossible to distinguish dead specimens of one genus from those of the other.

Priesner (1928), in characterising *Scirtothrips* Shull, states that the fore-wing has mostly one distinct longitudinal vein and on this basis includes it in SERICOTHRIPINAE Karny. The genotype *S. ruthveni* Shull has two quite distinct longitudinal veins. Hence Priesner's statement, that the fore-wing has mostly one distinct longitudinal vein, is not valid for *Scirtothrips* Shull.

Hence the only character to which *Scirtothrips* can hold is the presence of only one seta near each hind angle of the pronotum. In the same way that *Neolimothrips* Shumsher is a subgenus of *Limothrips* Hal., and *Monochaetella* Pr. and *Dichaetella* Pr. are subgenera of *Dendrothrips* Uzel, *Scirtothrips* should be considered as only a subgenus of *Anaphothrips* Uzel, differing from the subgenus *Chaetanaphothrips* Pr. in having only one instead of two setae at each hind angle of pronotum. Thus while *Anaphothrips oligochaetus* Karny (1926) and *A. albus* Jones (1912) would belong to the subgenus *Scirtothrips*, *Scirtothrips spinosus* Faure (1929) would be a true *Chaetanaphothrips*.

### *Anaphothrips* (*Scirtothrips*) *dorsalis* (Hood).

1919, *Scirtothrips dorsalis* Hood, *Insec. Insc. Menst.* **7** : 90–91.
1926, *Anaphothrips oligochaetus* Karny, *Mem. Dept. Agr. India*, Ent. ser. **9** (6) : 201 (**New Synonymy**).
1928, *Scirtothrips dorsalis* Ramakrishna, *Mem. Dep. Agr. India*, Ent. ser. **10** (7) : 251.
1931, *Scirtothrips dorsalis* Ramakrishna & Margabandhu, *J. Bombay nat. Hist. Soc.* **34** (4) : 1032.

As has been shown above, *Anaphothrips oligochaetus* Karny belongs to the subgenus *Scirtothrips* Shull by virtue of having only one seta near each hind angle of pronotum. From the original descriptions of *oligochaetus* Karny and *dorsalis* Hood the following are the only differentiating characters :

| *dorsalis* | *oligochaetus* |
|---|---|
| Head about 1·77 as broad as long. | Head 1·42 as broad as long. |
| Antennae about 3 times as long as head. | Antennae about 2·4 as long as head. |
| Antennal segments 4, 5 and 6 equal, 3 longer. | Antennal segments 3, 4 and 6 equal, 5 shorter. |
| Lower vein of fore-wing with 2 or 3 setae (in female; Ramakrishna and Margabandhu's description of male—1931—does not give wing chaetotaxy). | Lower vein of fore-wing with only 1 or 2 setae (male and female). |
| In female the "abdominal segments 3–8 with a basal transverse dark line in the median fourth followed by a brown blotch." | "Margins between abdominal segments 3–7 in the female very narrowly brown." |
| A little broader species than *oligochaetus*. | |

The width of the body parts of weakly chitinised thrips in relation to length, especially in the case of the head, is greatly affected by the degree of thinness of the mounting medium (viz. Canada balsam in xylol in the present case) allowing the cover slip to flatten, more or less, the thrips below. In the case of

the dreaded chilli thrips (*Scirtothrips dorsalis* Hood) collected by me in July–August 1944 from *Capsicum annuum* and *Ricinus communis* leaves at Coimbatore, the head was found to be about 1·5 as broad as long in thick Canada-balsam, while in the thin medium it was about 1·8 as broad as long.

The length of the antennae within a small random collection of a dozen odd specimens varies from about 200 to 230 microns. The relative lengths of the antennal segments 3–6 show all sorts of variations, as will be seen from the table below where (*a*) is typical of *oligochaetus* and (*b*) of *dorsalis* (M indicates males, F females).

| Segments | M | M | F (*b*) | F | F (*a*) | F | F | F | F | F | F | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| III . . . | 33 | 33 | 42 | 40 | 40 | 40 | 39 | 39 | 42 | 37 | 35 | 37 |
| IV . . . | 34 | 33 | 37 | 39 | 39 | 39 | 36 | 37 | 37 | 37 | 37 | 36 |
| V . . . | 33 | 34 | 38 | 37 | 33 | 32 | 31 | 30 | 30 | 33 | 33 | 32 |
| VI . . . | 36 | 34 | 39 | 42 | 40 | 39 | 37 | 37 | 39 | 39 | 39 | 39 |

With regard to the wing chaetotaxy, it is found that the females usually have two setae on the lower vein of fore-wing, but occasionally an extra, irregularly placed seta may occur on it. The male often has only one seta on this vein.

The chilli thrips that I examined have Hood's abdominal brown markings on the respective tergites and Karny's markings on the respective sternites. Evidently they each ignored one side of the female abdomen. It is noticed that, of the sternal markings, the lines between segments 4 and 7 stretch almost from side to side while that between 3 and 4 is confined to the middle third of the width of the abdomen.

I am therefore convinced that *Anaphothrips oligochaetus* Karny (1926) is synonymous with *Scirtothrips dorsalis* Hood (1919).

## A NEW GENERIC NAME IN ACRIDIDAE (ORTHOPTERA)

By B. P. Uvarov, C.M.G., D.Sc., F.R.E.S.

My friend Mr. James A. G. Rehn has kindly drawn my attention to the fact that the generic name *Echinacris* Uvarov 1940, proposed by me to replace the preoccupied *Schinzia* Saussure 1899 (Orthoptera, Acrididae) is itself preoccupied by *Echinacris* Pictet 1888 (Orthoptera, Tettigoniidae). This necessitates the following nomenclatorial change :—

**Echinotropis** *nom. n.* to replace *Echinacris* Uvarov 1940 (*Ann. Mag. nat. Hist.* (11) **6** : 377), *nec Echinacris* Pictet 1888 (*Mem. Soc. Phys. Hist. nat. Genève* **30** : 19), for the genus *Schinzia* Saussure 1899 (*Abh. Senkenberg. naturfor. Ges.* **21** : 648), with *Schinzia horrida* Saussure 1899 as the genotype.

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Papers offered for publication in the *Transactions* are considered by the Publication Committee of the Society, which meets usually in the months of May and November. In order that papers may be considered at these meetings it is necessary for the manuscript and drawings for any illustrations to be in the hands of the Secretary fourteen days before the meeting of the Committee.

Papers of less than eight printed pages (approximately 7000 words) will not normally be accepted for the *Transactions*, and papers by authors who are not Fellows of the Society must be communicated by a Fellow.

## PROCEEDINGS SERIES A AND SERIES B

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*Series C* is issued prior to every General Meeting. It contains abstracts of exhibits to be shown and communications to be made, together with the titles of papers accepted for publication.

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# MEETINGS

## TO BE HELD IN THE SOCIETY'S ROOMS

### 41, Queen's Gate, S.W.7

**1945.**

WEDNESDAY, January 17 (ANNUAL MEETING)
,, February 7
,, March 7

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# THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

## The Fellowship and Fees

Fellows pay an Admission Fee of £3 3*s*. The Annual Contribution of £2 2*s*. is due on the first day of January in each year, and is payable in advance. Fellows under the age of 25 years may pay the entrance fee in three equal annual instalments.

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## Meetings and Exhibitions

Fellows and others wishing to make a communication to a General Meeting of the Society are requested to send in their names, the title of their exhibit, and a short abstract of their remarks, to the Registrar fourteen days before the meeting at which it is proposed to make the communication. Should it be desirable to publish a fuller account of the communication the manuscript may be submitted for publication in *Proceedings Series A* or *Series B*. If the epidiascope is required, 24 hours' notice must be given. Objects for projection should not exceed 6 ins. by 6 ins.

Fellows resident abroad, or otherwise unable to attend meetings, are reminded that notes or observations sent to the Secretary may be communicated to a General Meeting on their behalf.

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